

Occurrence of Cape Parrot *Poicephalus robustus* at non-forest feeding sites in South Africa: threats to a declining population

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Il est estimé que moins de 500 individus du Perroquet robuste *Poicephalus robustus* survivent dans les forêts montagneuses du sud-est de l'Afrique du Sud. L'espèce est menacée par la destruction de son habitat, la persécution mal intentionnée, la capture pour le commerce illégal et, peut-être, par des maladies. Cette espèce principalement forestière se nourrit également en dehors du milieu forestier; ce comportement a été observé dans toute la zone de distribution et est probablement lié à une pénurie saisonnière de fruits en forêt. Des petits rassemblements à certains sites, dont l'importance est mise en lumière, pourraient être constitués d'oiseaux provenant d'un aire plus vaste. À cette époque, l'espèce est particulièrement vulnérable et menacée par la persécution des braconniers. La disparition d'un petit nombre d'individus pourrait avoir un effet négatif significatif sur les chances de survie à long terme de l'espèce dans la nature.

Introduction

Cape (Brown-necked) Parrot *Poicephalus robustus* occurs in a discontinuous belt through the naturally fragmented indigenous forests of south-eastern South Africa, from Fort Beaufort in Eastern Cape Province to the Karkloof of KwaZulu-Natal Province¹⁷. A relict population is found 600 km north in forests on the eastern escarpment around Tzaneen, Mpumalanga Province^{6,17}. Its distribution was possibly once continuous, as historical records for regions between these two populations exist²². Like many other parrot species, habitat destruction and capture of birds for illegal trade have resulted in population declines¹⁴. Additional threats to wild populations include disease and shooting of birds as pests¹⁴.

Of recent concern has been the report of Cape Parrots being shot or captured at feeding sites away from indigenous forest patches. 'Problem birds' causing significant damage to commercial pecan-nut crops have been shot. Recently, at a site in the KwaZulu-Natal midlands, c20 individuals were reportedly captured at an orchard, but prosecution of the alleged perpetrators was unsuccessful. With c200 birds in the area, this may have significant implications on wild populations.

Skead¹² estimated as few as 600 Cape Parrots remaining in the Eastern Cape and recent estimates of the total wild Cape Parrot population are of no more than 1,000 birds, with possibly fewer than 500^{5,7}. However, misconceptions persist, with overly optimistic impressions of the number of remaining birds being garnered from the occurrence of large flocks at profitable food sources²⁰. These gatherings occur

away from forests and can involve flocks of up to 200 individuals²⁰.

A study in KwaZulu-Natal noted that Cape Parrot is a dietary specialist, feeding mainly on yellowwoods *Podocarpus* spp.²¹. Though Cape Parrot is an Afromontane forest specialist^{10,15}, it has adapted to using exotic and indigenous food sources outside forests¹⁸. In addition, dead yellowwoods, especially Outeniqua Yellowwood *P. falcatus*, are used as socialising points in forests and natural cavities as nesting sites²⁰. Yellowwoods were formerly heavily logged and the effects of this activity are probably evident. Food trees have been reduced in many forests and there are few extant large dead trees capable of providing appropriate nest cavities for this relatively large parrot. Also, South African Afromontane forests have irregular fruit production and occasional periods of low food productivity^{8,16,21}. Cape Parrot is therefore reliant on additional food sources during such periods²¹. Here, we highlight the importance of pecan-nut and alternative food sources in the diet of Cape Parrot, and the consequences of large flocks gathering at these and other feeding sites.

Methods

Flock size of Cape Parrot was recorded at a pecan-nut orchard (c4 trees) in Donnybrook, KwaZulu-Natal since 1998 (P St Pern pers comm). Additional and historical records gathered during our involvement in Cape Parrot research since 1994 were also collated. The implications of these gatherings outside forest were investigated.

Results

Examples of sites where Cape Parrots have been recorded feeding away from indigenous forest are summarised in Table 1. This list is not exhaustive.

Max. daily numbers of Cape Parrots at a pecan-nut orchard (site 1, Table 1) over a three-year period are shown in Fig 1. Here, Cape Parrot was common in June–September, when pecan-nuts were fruiting. In 1998 they were first seen feeding on 11 June and last observed on 3 July. They did not appear in 1999 but in 2000 were seen on 11–25 August (Fig 1).

In April 1998, a flock of 52 was seen feeding on pecan-nuts at Nqadu, Eastern Cape Province (site 10, Table 1), during the annual Cape Parrot Big Birding Day⁵. The following year a total of five was seen at the same site and a larger flock, of c77, was at Misty Mount (site 11, Table 1), 30 km distant. In this region (Umtata) they fed predominantly on pecan-nuts in March–May⁵.

In the 1960s flocks of up to 100 were observed feeding on Black Wattle *Acacia mearnsii* in the Karkloof (L Bouwer pers comm; site 7, Table 1). Today Cape Parrot is scarce in the region and seldom are more than ten seen together in this area. In the early 1980s, flocks of 10–20 were periodically recorded (CTS pers obs) feeding in a pecan-nut orchard at Menin farm (site 3, Table 1). Here it was also recorded unsuccessfully attempting to feed on pears. In certain years flocks flew over between Hlabeni forest adjacent to Menin farm, and Centocow Mission station (site 4, Table 1), in the early morning and late afternoon. In 1994 the species was recorded feeding on *Syringa Melia azadarach*²¹ and in the 1950s often fed in apricot orchards at Centocow (T Symes pers comm). Flocks of up to 200 were not uncommon at this time and were shot because of damage caused to orchard crops (T Symes pers comm). In the Umzimkulu Valley, peach trees in the yards of tribal land residents were used by Cape Parrot. A popular feeding site in the 1970s was at a church near Centocow Mission (T Symes pers comm).

Discussion

Approximately 33% of parrot species face threats in their natural habitat¹⁴. However, in certain areas parrots have achieved pest status^{1,9}, and in urban areas feral populations have become established³. Some instances of human activity have benefited parrots by providing alternative food sources and drinking troughs in dry areas. For example, the range of Rüppell's Parrot *Poicephalus rueppellii* has possibly increased as a result of the presence of drinking sites provided for livestock in dry regions of Namibia¹¹. Grey-headed *P. (robustus) suabelicus*, Meyer's *P.*

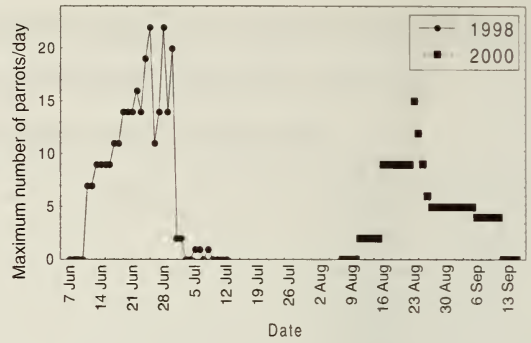


Figure 1. Occurrence of Cape Parrot *Poicephalus robustus* at Splendora Farm (pecan-nut feeding site), Donnybrook, KwaZulu-Natal, showing max. number recorded each day (P St Pern pers comm).

meyeri and Brown-headed Parrots *P. cryptoxanthus*, and Black-cheeked *Agapornis (liliana) nigrigenis*, Rosy-faced *A. roseicollis* and Lillian's Lovebirds *A. liliana* have all been observed at artificial drinking sites and planted crops in various parts of their range (CTS pers obs; S Taylor, L Warburton pers comm).

Frugivores, seedeaters and nectarivores are limited by food resources, and thus restricted to larger, more productive forests^{2,15}. Therefore, in periods of low food production in forests wild birds are forced to forage in neighbouring forests or seek alternative food sources outside forests. In Eastern Cape Province flocks of Cape Parrot occurred closer to the coast in drier years and during periods of possible lower forest fruit production^{19,20}. Overland flights, first described by Skead¹³ and the importance of non-forest food sources were noted nearly 100 years ago. Davies⁴ collected specimens near Flagstaff, Eastern Cape Province, where Cape Parrot was present in 'great numbers', their crops filled with Black Wattle seeds.

Cape Parrot is known to travel up to 90 km daily to food sources away from regular forest feeding

Figure 2. Naturally fragmented Afromontane forest patches, habitat of Cape Parrot *Poicephalus robustus*.

Figure 3. Cape Parrot *Poicephalus robustus* flocking in exotic *Eucalyptus* spp. near pecan-nut orchard.

Figure 4. Cape Parrot *Poicephalus robustus* feeding on unripe pecan-nuts at Nqadu, Umtata.

Figure 5. Overland flights of Cape Parrot *Poicephalus robustus* between a pecan-nut orchard at Nqadu and indigenous forest.

Figure 6. Cape Parrot *Poicephalus robustus* feeding on ripe pecan-nuts at Donnybrook.

Figure 7. Cape Parrot *Poicephalus robustus* feeding on unripe Outeniqua Yellowwood *Podocarpus falcatus* in a farmyard in Boston, KwaZulu-Natal.



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Table 1. Examples of feeding sites of Cape (Brown-necked) Parrot *Poicephalus robustus* outside indigenous forest (Transkei records refer to the former Transkei homeland prior to 1994, now incorporated within Eastern Cape Province)

Site	Locality	Food source	Year	Reference
1	Splendora Farm, Donnybrook (KZN)	Pecan-nuts	1998, 2000	This study, Fig 1
2	Donnybrook (KZN)	Wild Cherry	1997	CTD unpubl. data
3	Menin Farm, Creighton (KZN)	Pecan-nuts, pears, apples	c1983	CTS pers obs
4	Centocow, Creighton (KZN)	Syringa <i>Melia azedarach</i>	1992–1993	Wirminghaus <i>et al</i> ¹
5	Centocow, Creighton (KZN)	Apricot	c1950s	T. Symes pers comm
6	Ngele, Weza (KZN)	Black Wattle <i>Acacia mearnsii</i>	1996–1997, 2001	Wirminghaus <i>et al</i> ¹ , C Forsyth pers comm
7	Clan, Karkloof (KZN)	Black Wattle <i>Acacia mearnsii</i>	1960s	L Bouwer pers comm
8	Bulwer (KZN)	Apples	1995	CTD unpubl. data
9	Boston (KZN)	Outeniqua Yellowwood <i>Podocarpus falcatus</i> (tree in garden)	1998	CTD unpubl. data
10	Nqadu, Umtata (Transkei)	Pecan-nuts	1997–2001	Downs & Symes ⁵
11	Misty Mount, Umtata (Transkei)	Pecan-nuts	1999–2001	Downs & Symes ⁵ , D Kemp pers comm
12	King Williams Town (EC)	Wild Plum <i>Harpephyllum caffrum</i> (indigenous tree planted in town)	1990s	J Sheard pers comm

sites^{12,13}. Pecan-nut plantations are clumped and not abundant. Concentrations of Cape Parrot occur at these sites during periods of low forest fruit production and birds at such gatherings may represent a large proportion of those in a huge area of the species' range²¹.

There has been much speculation as to the reasons for the recent decline in Cape Parrot numbers. The compound effects of trapping for illegal trade, habitat destruction and, in particular, removal of mature yellowwoods, disease and shooting have resulted in a significant decline in the last 50 years^{18,19}. It is, however, at non-forest feeding sites that large flocks are vulnerable to capture and persecution. These sites require documentation and their importance for conservation noted.

Because Cape Parrot occurs in a naturally fragmented habitat it is difficult to conserve¹⁸. Afromontane forests are under the jurisdiction of many landowners and are threatened by over-exploitation¹⁸, ranging from subsistence removal of forest fauna and flora to over-use of products removed for various reasons, eg medicinal purposes. This is difficult to control and, together with the threat to populations at feeding sites, has implications for the conservation of Cape Parrot. Recent efforts, involving certain landowners at non-forest feeding sites (eg Splendora Farm, Donnybrook) have aimed to protect and monitor Cape Parrot numbers. By making available newly planted pecan-nut trees, future feeding sites can be established and the species' conservation assured. ☞

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